



7056 US Route 7
Post Office Box 120
North Ferrisburgh, Vermont 05473
802.425-7788
Fax 802.425.7799

Memorandum

To: White & Burke - Moran Plant Project File

Date: June 22, 2010

Project No.: 57372.00

From: Jeffrey A. Nelson and Adam R. Crary

Re: Moran Plant – Existing Wetland
Functions and Values Documentation

At the request of White and Burke Real Estate Investors Inc., on behalf of the City of Burlington (City or Applicant), VHB Pioneer (VHBP) conducted wetland delineations within an approximately 3.5 to 4 acre investigation area at the proposed Moran Plant (Project) redevelopment site in Burlington, Vermont. The investigation area is bounded by a sheet pile wall to the north, recreational path to the east, Moran Plant to south and Lake Champlain to the west. VHBP reviewed available historical photography and corresponding climate data spanning sixty seven years covering changes in land use, land cover, lake levels, and development and subsequently utilized the historical aerial review in conducting wetland delineations for the Project. This memorandum has been prepared to summarize the results of the wetland delineations conducted at the Moran Plant Site.

Site Description and Location

The Project site is located within the historically industrial and commercial land use matrix along the Burlington waterfront. Currently, the dominant land cover on the site is secondary succession woodland, with small open areas, and one isolation berm that has developed wetland vegetation during the years since removal of the petroleum storage-related infrastructure previously associated with the site (Heindel & Noyes, 1997). The Project is located on the edge of Lake Champlain, which although is not contained within the borders of Vermont, is considered the largest fresh water body in the region. The Project site has a long history of commercial and industrial use dating back to the Linsley Lumber Mill that was constructed on filled lands within the Burlington Harbor, between the years of 1860-1862 (UVM CAP, 2009).

Methodology and Existing Conditions

Daniel Prasch, formerly Senior Wetland Scientist, of VHBP conducted the natural resources assessment on September 3, 2009 and September 14, 2009. This area was previously delineated by Daniel Prasch on July 2, 2008 as part of a separate Section 248 filing with the Vermont Public Services Board. Precipitation conditions were near normal for the month of September based on review of United States Department of Agriculture (USDA) Natural

Resource Conservation Service (NRCS) Wetness Evaluation Tables (WETS) for Station: BURLINGTON WSO AP, VT1081. Actual precipitation recorded for Burlington, Vermont for the month of September 2009 was 3.67 inches in comparison to the 30-year average of 3.83 (NOAA, 2010). Weather conditions were warm and sunny during both days of delineation and a thorough evaluation of soils, hydrology, and vegetation was conducted.

Wetland delineations followed methodology outlined in the *Corps of Engineers Wetland Delineation Manual* (1987 Manual). The 1987 Manual utilizes a three parameter approach to wetland delineation, including hydric soils, dominant hydrophytic vegetation and wetland hydrology. Wetlands were identified in the field with pink "Wetland Delineation" flagging labeled with the year, wetland ID, and flag number (e.g., 2009-1 #1). Flag locations were located in the field by VHBP using a Trimble® GPS unit capable of sub-meter accuracy.

As outlined in the 1987 Manual, when any one or more of the delineation parameters is not met due to some physical alteration whether it is man-made or naturally induced, Section F Subsection 4 would be implemented in making a wetland determination. In evaluating whether Normal Circumstances exist within the investigation area, one needs to consider the relative extent and permanence of the physical alteration to the wetland parameter being considered under Section F.

Wetlands

Wetland 2009-1 is a Class Three wetland bounded by the sheet pile wall to the north, recreational path to the east, Moran Plant to south, and Lake Champlain and the recreational bike path to the west. This feature receives hydrology from the surrounding impervious surfaces and is the result of historic excavation and fill activities. This wetland has a mix of emergent and scrub-shrub wetland vegetation communities, and is dominated by sensitive fern (*Onoclea sensibilis*), giant goldenrod (*Solidago gigantea*), red osier dogwood (*Cornus sericea*), and Bebb willow (*Salix bebbiana*). The soils in this wetland exhibited a fine sandy silt loam texture with prominent redoximorphic features in the "B" horizon. Indicators of hydrology in this wetland included soils which were saturated to the surface. This wetland is a disturbed wetland and three transects were completed at this site.

Regulatory Considerations

Significant wetlands, designated Class One or Class Two and mapped on the Vermont Significant Wetlands Inventory (VSWI), are regulated in Vermont under the Vermont Wetland Rules (VWR). Any proposed impacts to these wetlands, or their associated buffer zones, require a Conditional Use Determination (CUD) from the Vermont Department of Environmental Conservation (DEC). VHBP has reviewed the VSWI mapping for the proposed Project alignment, and there are no significant wetland features mapped in the vicinity of the proposed path alignment. Therefore, the one wetland mapped is a Class

Three Wetland. Final classification of VWR class is determined by the Agency of Natural Resources (ANR).

As outlined in the *Corps of Engineers Wetland Delineation Manual* (1987 Manual) Section F, Subsection 4- Man Induced Wetlands, Wetland 2009-1 is a man-induced wetland that has characteristics of a naturally occurring wetlands but it is due to either intentional or incidental human activities. This area serves as impoundment due to the presence of berms and has served as a dredged material disposal area. Although all three parameters can be found in this wetland, indicators of hydric soil characteristics are minimal. A history of depositing fill material included the construction of berms from earthen material around petroleum tanks in order to contain petroleum in the event of a spill. The tanks were removed from the site in 1992 as depicted on the chronological map series. In the summer and fall of 1996 the City of Burlington brought in fill from several local construction projects. The Department of Public Works received a permit and was given authorization to place "clean fill" into the historically bermed depressions which were left from the removal of the tanks.

Based on initial discussions with U.S. Army Corps of Engineers (USACE or Corps) personnel at a February 2, 2010 meeting, the Corps is in agreement with the boundaries of the VHBP-delineated wetland at the Project site. Further, the Corps is of the opinion that the feature is both jurisdictional under Section 404 of the Clean Water Act and is "a wetland adjacent to a Navigable Water of the U.S." Therefore, pursuant to the Corps interpretation of the Vermont General Permit No: NAE-2007-24¹, impacts to wetlands adjacent to Lake Champlain that are greater than 5,000 square feet (sf) will require the City to file an Individual Section 404 permit application for the Project. With respect to wetland functions, the principal function performed is toxicant reduction, due to the original purpose and ongoing function of the basin in retaining hydrocarbons.

The Applicant extensively evaluated the feasibility of seeking authorization for the project under a General Permit. After extensive review by the Applicant, involving the entire Project team, it was determined that it is not feasible to keep impacts to jurisdictional waters below the 5,000 sf threshold while meeting project goals due to limited acreage and the variety of facilities that need to be accommodated.

It has been decided to seek an Individual Permit which will include both the wetland impacts and various shoreline improvements, to be undertaken for the use of the Community Sailing Center and Lake Champlain Maritime Museum. This will require providing satisfactory evidence to the Corps substantiating that the site design meets the requirements of avoidance and minimization in the context of the Least Environmentally Damaging Practicable Alternative (LEDPA). A plan to mitigate unavoidable impacts to

¹ The definition of Navigable Waters of the U.S. included in the current General Permit does not include adjacent wetlands. However, the prior (expired) GP-58 did include such wetlands in this definition. When made aware of this discrepancy in the present context, the Corps took the position that this exclusion was a typographical error, and that they would exercise their discretion to require an Individual Permit for this site if proposed impacts exceeded 5000 square feet.

wetland functions and values will also be required as part of the Individual Permit application. Multiple options are being explored at this time in order to fulfill the eventual mitigation requirements.

Summary:

- USACE has field verified and concurred with the 2009 VHBP delineation, which has resulted in a substantial reduction in the size of the wetland. However, this would be revisited if there is a formal request for Jurisdictional Determination made to USACE.
- Based on a review of the functions and values data sheet for the subject wetland at the Moran Plant, USACE agrees that the wetland performs minimal functions, and is in agreement with our assessment contained in the report.
- Current wetland impacts are approximately 10,220 sq. ft. (0.23 acres) associated with the Community Sailing Center and adjacent outside boat storage areas. This impact assessment is based on 10/3/2009 plans prepared by Engineering Ventures.

DRAFT

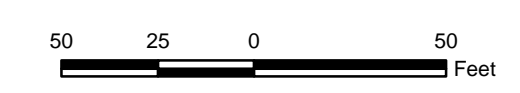
Former Moran Plant
City of Burlington, VT
Delineation Map



DRAFT: April 21, 2010

- Legend
- Top of Bank
 - Berm
 - Railroad
 - VHBP Limits of Investigation
 - VHBP Wetland (2009)
 - 2 ft. Contour
 - 10 ft. Contour

VHB PIONEER
7056 US Route 7, PO Box 120
North Ferrisburgh, VT 05473
1.802.425.7788 F.802.425.7799
www.vhb.com



F:\57372.00\GIS\Project\NR_Delineation Map_24x36.mxd Prepared by: JAT

